PATENT CLAIMS

1. Autonomous switching converter,
characterized in that a said input voltage (U_E) can be applied to a said storage inductor (L1) by means of a said first semiconductor switch (T1), the voltage drop of a said sensor resistor (R2) that is connected in series to the said switch (T1) is fed to a control electrode of a said second semiconductor switch (T2) as an indicator of the current through the said inductor (L1), the said input voltage (U_E) is connected to the control electrode of the said first switch (T1) via a said resistor (R1), this control electrode can be grounded via the switching path of the said second switch (T2), wherein, after switching on the input voltage during a first conduction phase of a said first duration (t1) of the first switch and an increase in current through the inductor, the said second switch becomes conductive and breaks the contact of the said first switch (T1), whereupon the said storage inductor (L1) then supplies energy to a said output capacitor (C2) for a said second duration (t2) via a said rectifier diode (D1), until the said capacitor (C1) of a series RC element that connects the switching input of the said second switch (T2) to the input voltage is charged, the contact of the said second switch (T2) is broken and the said first switch (T1) becomes conductive again.

2. Switching converter in accordance with claim 1, characterized in that the said rectifier diode (D1) galvanically connects the said output capacitor (C2) to the said storage inductor (L1).

3. Switching converter in accordance with claim 1, characterized in that the said storage inductor (L1) is formed by the primary winding of a said transformer (UET), on the said secondary winding (L2) of which are connected the said rectifier diode (D1) and the said output capacitor (C2).

4. Switching converter in accordance with one of the claims 1 through 3, characterized in that the said capacitor (C1) of the said RC element (C1/R5) can be discharged via a said drop resistor (R_s) and a said discharge diode (D2)

with the said first switch (T1) switched on, wherein the said drop resistor (R_S) is considerably smaller than the said resistor (R5) of the RC element.

5. Switching converter in accordance with one of the claims 1 through 4, characterized in that the control input of the said second switch (T2) is protected by means of a said reverse pole protection diode (D3).

6. Switching converter in accordance with one of the claims 1 through 5, characterized in that the said output voltage (U_A) is regulated at the said output capacitor (C2).

7. Switching converter in accordance with claim 2 and claim 6, characterized in that the switching path of a said third semiconductor switch (T3), whose control input is connected to the said output voltage (U_A) via a said Zener diode (D4), lies in parallel to the switching path of the said second switch (T2).

8. Switching converter in accordance with claim 3 and claim 6, characterized in that the switching path of the said second switch (T2) is bridged over by the collector-emitter path of the phototransistor of a said optocoupler (OKO), whose sending diode is connected at the said output voltage (U_A) via a said Zener diode (D4).